

2013

Best Practices in Writing Assessment for Instruction

Robert C. Calfee

University of California - Riverside

Roxanne Greitz Miller

Chapman University, rgmiller@chapman.edu

Follow this and additional works at: http://digitalcommons.chapman.edu/education_books



Part of the [Educational Assessment, Evaluation, and Research Commons](#)

Recommended Citation

Calfee, R. C., & Miller, R. G. (2013). Best practices in writing assessment for instruction. In S. Graham, C. MacArthur, and J. Fitzgerald (Eds.), *Best practices in writing instruction* (2nd Edition) (pp. 351-380). New York: Guilford.

This Book is brought to you for free and open access by the College of Educational Studies at Chapman University Digital Commons. It has been accepted for inclusion in Education Faculty Books and Book Chapters by an authorized administrator of Chapman University Digital Commons. For more information, please contact laughtin@chapman.edu.

Chapter 15

Best Practices in Writing Assessment for Instruction

ROBERT C. CALFEE

ROXANNE GREITZ MILLER

When we prepared this chapter several years ago for the first edition of *Best Practices*, we felt that we were pushing the envelope. We proposed (1) that teachers give high priority to writing as an essential part of a balanced literacy program, (2) that writing be linked to the content areas to “make thinking visible” (Miller & Calfee, 2004; Richart, Church, & Morrison, 2011), and (3) that teachers develop classroom-based writing assessments tailored to their specific settings, their students, and their own learning priorities. We set the stage with three portraits drawn from observations of excellent teachers, illustrating the flow of formative writing assessments across the developmental span from kindergarten to high school. We then spelled out ways in which our proposals might be implemented, cautioning readers about barriers posed by No Child Left Behind (NCLB) accountability and standardized tests.

As we complete revisions for the second edition, a glimmer of light appears in the east, a portent of forthcoming changes in the nation’s schools. Recommendations in the Common Core State Standards (CCSS) call for substantial modifications in both reading and writing. The full title warrants close reading: *The Common Core State Standards for English Language Arts & Literacy in History/Social Studies, Science, and Technical Subjects* (National Governors Association [NGA] & Council of Chief State School Officers [CCSSO], 2010). The CCSS call for integration of

reading and writing, and for integration with the subject matter areas. These ideas are truly radical!

Our editors asked authors to incorporate the CCSS in their chapters, and to discuss “how the Standards might be expanded.” We take full advantage of this opportunity, envisioning a time when classroom teachers will enjoy substantial professional freedoms and responsibilities. The themes from our earlier chapter foreshadowed what will now become “best practice.” The chapter begins with a review of ways in which the CCSS are going to handle writing assessment, and of the work of two consortia (the Partnership for Assessment of Readiness for College and Careers (PARCC) and the SMARTER Balanced Assessment Consortium (SBAC), that are constructing assessment systems for implementation of the CCSS (cf. Educational Testing Service [ETS], 2012). Three portraits then set the stage for core sections on *literacy for learning*, *text-based writing*, and *teacher-based classroom writing assessment*. The focus throughout the chapter is on formative assessment, where the purpose is to monitor and guide instruction. External testing will clearly continue to be part of the school year, but the door seems to be opening for teachers to take a greater role in assessing student learning. Our aim is to encourage and support such activities.

Writing in the Age of New Standards

The CCSS were developed by the Council of Chief State School Officers and the National Governors Association to establish nationwide expectations for student achievement. Information about the CCSS is spread over dozens of sources, hundreds if not thousands of pages, with changes almost daily (ETS, 2010). The CCSS set forth *content expectations*: What essential domains in literacy (and mathematics) should be the target of student learning? The assessment consortia are establishing *performance expectations* for the CCSS; if a standard requires students to learn to jump, the performance assessment lays out details for “how high?” Several groups are playing support roles for implementation, including the Achieve group, which is developing implementation packages, and the assessment consortia. Publishers, state departments of education, and local districts are hard at work deciding how to respond to mandates. The entire program is to be in place in 2015, but many educators are already “doing the Standards.”

Several features of the CCSS promise to make a big difference for K–12 teachers in the literacy arena—in reading and writing; in the relations among curriculum, instruction, and assessment; and in linkages between literacy and the content areas.

- The CCSS are anchored in “college and career preparedness”; they “define general, cross-disciplinary literacy expectations that must be met for students to be prepared to enter college and workforce training programs . . .” (p. 4).

- The CCSS propose an integrated literacy model: “The Standards are divided into Reading, Writing, Speaking and Listening, and Language strands for conceptual clarity, [but] the processes of communication are closely connected . . .” (p. 4). For the past 25 years, the spotlight has been focused on reading.

- The description of literacy in the CCSS is quite broad. For reading: “Students who meet the Standards readily undertake the close attentive reading that is at the heart of understanding and enjoying complex works of literature. They habitually perform the critical reading necessary to pick carefully through the staggering amount of information available today in print and digitally. They actively seek the wide, deep, and thoughtful engagement with high-quality literary and informational texts that builds knowledge, enlarges experience, and broadens world views. . . . [They] develop the skills in reading, writing, speaking, and listening that are the foundation for any creative and purposeful expression in language” (p. 4).

- Students are expected to become self-motivated and to make full use of the tools of literacy, independently and habitually—they are to become literacy experts.

- Basic skills are to serve higher level activities; a brief section on Foundational Skills in K–5 Reading covers outcomes from the National Reading Panel (phonological awareness, phonics, and vocabulary; National Institute of Child Health and Human Development [NICHD], 2000).

- Literacy standards are linked to major content areas in both elementary and secondary grades; students are supposed to learn to read and write about *things that are really important—for college and careers!*

- The CCSS repeatedly call for a balance between informational and literary texts, between reports and stories, between fact and fiction.

- The CCSS encourage extensions to the multimedia dimensions of contemporary literacy, to “print and non-print media forms, old and new” (p. 4).

Several matters are *not* covered by the CCSS that seem important to us:

- The CCSS describe learning to read words, paragraphs, and pages (Richards, 1942), but do not say much about *how to read a book* (Adler & van Doren, 1967).

■ These are content standards, not performance standards; they describe what students should know and be able to do, but leave open how well students should “know and do.”

■ The CCSS do not recommend how students are to be helped to meet the CCSS; “Teachers are free to provide students with whatever tools and knowledge their professional judgment and experience identify as most helpful for meeting these goals . . . ” (p. 4). Teachers’ professional judgments and experiences will be critical for supporting the CCSS. The challenge is to reempower many who have spent years following scripts and pacing charts. We think that an enormous reservoir of “professional judgments and experiences” is in place, ready to be tapped.

Numerous implementation issues must be addressed as the program rolls out. Here are three examples that are roiling the water as we complete this chapter:

■ A mismatch between what is taught and what is tested—and what counts. Summative standardized testing of the CCSS is difficult to reconcile with the image of students spending the year working collaboratively on multiweek projects in the content areas.

■ The emphasis on “informational” text is taking shape as disconnected snippets of nonfiction writing. A more positive example comes from page 33 of the CCSS, where *Staying on topic within a grade and across grades* lists almost 40 trade books on the human body spanning kindergarten through fifth grade. These books are a good start for studying human biology, but more is needed than a collection of titles.

■ “Close reading” is probably a passing fad, but as of this writing is being presented as an essential feature in implementation of the CCSS. The idea is that reading means a detailed study of a short passage (a paragraph or page), in which the reader attends only to the printed material, trying to ignore previous experience. The CCSS mention close reading as one of several strategies for handling a text, and by the time you read this chapter this idea may have been placed in perspective. But be on the alert for other fads.

Pulling these pieces together, here is our status report on current events, along with our wish lists. First, summative tests will include *extended performance tasks* extending over a week or more (ETS, 2010). Students from third grade through high school will be given a topic to study, and then assigned a writing task. They will have time to review and polish the final product. For our wish list, we hope that these performance tasks will “really count.” The summative package will also contain multiple-choice tests, and if the latter are more heavily weighted, then content coverage will

continue to be emphasized. Our hope is that student writing (and thinking) will be an important part of the final score, making it worthwhile for teachers to devote instructional time to these goals.

Second, the assessment consortia are developing *digital libraries* to help teachers in planning and conducting formative assessments. The libraries are to contain “released items; formative assessments; model content frameworks; instructional and formative tools and resources; student and educator tutorials and practice tests; scoring training modules; professional development materials; and an interactive report generation system” (ETS, 2010). Our hope is that the libraries will emphasize the professional development and teacher collaboration items rather than test items. Formative assessment is a dynamic process, which Cizek (2010) describes as “administered midstream, in the course of instruction . . . , [in order to] (1) identify the student’s strengths and weaknesses; (2) assist educators in planning subsequent education, (3) aid students in guiding their own learning, revising their work, and gaining self-evaluation skills, and (4) foster increased autonomy and responsibility for learning on the part of the student” (p. 4). We can imagine situations in which the teacher might decide to conduct something like a “test,” but these are likely to be rare events. What is most needed are examples of how to tap student knowledge and understanding on the fly, taking student responses as the cue for action. We can imagine “local libraries” that start with materials from the libraries, but are then populated with twitter and blog posts reflecting local contexts. These libraries will not turn out to be test collections, but living repositories of techniques for conducting dynamic assessments (Popham, 2008; Chappuis, Stiggins, Chappuis, & Arter, 2012).

Third, states, districts, and teachers are looking to publishers to develop *curriculum and instruction packages* to help students “meet the standards.” The idea of “teaching to a test” is not that bad if the tests are worthwhile. Large publishers are presently adapting reading series to incorporate more informational texts and promote high-level reading comprehension strategies. There will be new opportunities for supplemental publishers to develop curriculum packages that complement the basal series, especially in the areas of the reading–writing connection and integration of literacy and content areas. Today’s basal readers include embedded end-of-unit tests to check on student learning. We hope that the new materials will feature embedded formative assessment models, along with text-based writing activities. We also hope that the new materials will incorporate formative assessment modules, with “starters” embedded at multiple levels throughout the lesson plans, to check prior knowledge, monitor progress along the way, review achievement at the end of each unit, and assess transfer to related activities later in the year. Such modules can be educative for teachers.

Finally, the consortia have funding to construct *professional development programs* for the CCSS. Details have yet to be announced, but our hope is that these activities will be school- and district-based, with opportunities for individuals to use online activities and webinars. We can imagine a revival of activities such as summer “Chatauquas,” and participation in professional events (e.g., convention workshops jointly sponsored by the International Reading and National Science Teachers Associations). The CCSS have the potential to reform public schooling by helping practitioners integrate curriculum, instruction, and assessment around high-level, “college- and career-ready” goals that mesh with the local contexts.

It is with these activities and aspirations in mind that we now turn to the assessment of writing under the new CCSS, where writing will permeate the entire school curriculum, from the earliest grades through the high school years. We believe that the spirit of the CCSS will prevail and that the new programs will provide teachers with exciting new tools for ongoing classroom-based assessments. In this spirit, our chapter moves forward from the previous edition to this brave new world.

Three Portraits

This section presents three snapshots that place formative assessment within best practice in today’s classrooms. Each snapshot combines several observations into a single portrait. We begin with Samuel, a kindergartener, who delivered his first show-and-tell report earlier that morning. Now he sits beside Ms. Hancock as she reviews her notes. Sam is small for his age, and a bit shy. Facing the entire class had been a challenge, but he had done it! His topic had been his new baby sister. After announcing that she had come home from the hospital, he was at a loss about what to say next. Ms. Hancock prompted him. What did her hair look like? What noises did she make? What did she do? Samuel had something to say about each question. During the conference, Ms. Hancock writes four sentences using Samuel’s words: “Martha is my new sister. She is bald. She gurgles. She mostly sleeps.” Samuel has just completed his first project, which will be published in the weekly parent newsletter. At home, his parents are delighted as he reads his report, which later serves as the centerpiece of the parent–teacher conference.

Samantha, a fifth grader, has been a voracious reader since preschool. She became a “real writer” in second grade when she was encouraged to begin a personal journal. She had composed brief papers in the earlier grades, but now she faces a new challenge. Her teacher, Mr. Buchers, has announced that, in preparation for middle school, the March assignment will be a research paper. Students must first select a “current events topic”

and locate background reading. Mr. Buchers is a history buff, and in the fall he introduced students to historical analysis. Now the class will study history in the making! Mr. Buchers recognizes that he is pushing the students; this type of writing is usually introduced in middle school. But he is confident that they can handle it and will benefit from a head start. Students work in small groups on the assignment, which should take 2 or 3 weeks to complete. Mr. Buchers reviews the basics: find resources in the library and on the computer, take notes for the report, and prepare an outline—actually a graphic web. Samantha has chosen “Now is the time for a woman to be elected president.” Her father likes the idea, but her mother is less sure. Samantha agrees with her father but realizes that she must consider both sides of the issue. She is quite excited by the project.

Tom and Chizuko have been good friends since ninth-grade math. As seniors, the SAT writing test looms large on the horizon. They both enjoy math and science but are less comfortable with writing assignments. Neither did especially well on the PSAT writing test. They are studying together, using materials from the College Board website as a guide: “Brainstorm, collect information, organize, do a rough draft, revise and refine, read more, and write more” (College Board, 2006). Great advice, but how to apply it for an on-demand timed test? Math is much simpler—analyze the problem, work out the answer, and that’s it. Writing is mushy, with never enough time to make sure that everything is exactly right. And no one teaches writing! English classes are about novels and plays, and other teachers expect students to already know how to write. Their parents are no help.

These snapshots capture the variety of writing scenarios experienced by today’s students. There are writing standards, but the responsibility for acquiring skills rests largely on students’ shoulders. In the elementary grades, reading is the top priority; as much as half the school day is spent in the basal reader. By middle school and high school, teachers deal with more than 100 students every day, which means little opportunity for grading compositions. As the CCSS are implemented, these situations will need to undergo substantial change.

Literacy for Learning

Why, when, and how should students learn to write? In reading, the contrast has been made between learning to read and reading to learn (Chall, 1995). A similar distinction can be made for writing, but we think that the idea is questionable in both instances. From the earliest stages, both reading and writing should be embedded in the purposes of literacy: to think and to communicate. Students must acquire skills and strategies for

handling print, which requires time (and patience) from both teacher and student, but learning is more effective when motivated by a clear purpose. Learning to write makes most sense when the student is writing to learn (Zinsser, 1988). In school, this means that writing and writing assessment are linked to meaningful academic outcomes. Writing instruction should engage students with topics that have a long-term payoff, rather than writing simply to write.

For Samuel, the kindergarten show-and-tell report helps him to focus on a topic (his new sister), and to elaborate it with a few sentences. He can apply this strategy to the rock in his pocket, the snake in the terrarium, and (later) the causes of the Civil War. Samantha and her classmates are learning new skills and strategies, including the mechanics of the five-paragraph essay, but they are acquiring these skills while working on *something* that matters for an assignment that they have helped to shape. Tom and Chizuko have learned to write following the College Board guidelines. The SAT situation will be quite different. Instead of approaching the test feeling confident and self-assured, able to apply their learning to the situation, they suddenly confront a high-stakes task for which they feel ill prepared. If they are fortunate, their teacher (or tutor) will help them to handle the SAT situation, partly because it matters, but also because they are likely to encounter similar situations throughout life.

In each of these portraits, student compositions are evaluated in some fashion. Samuel was aware that Ms. Hancock was judging his report; in fact, everyone in the class knew that he had not produced the “three things” that were the standard for a show-and-tell presentation. He had failed, but suddenly the situation changed, and he had succeeded! For Samantha, her writing project will eventually be graded, but Mr. Bucher has posted the grading criteria (the rubrics) for the assignment on the classroom wall. Since September, Samantha has gone through the process: (1) think about the rubrics in preparing the draft, (2) run your work by a peer, and (3) show it to Mr. Bucher before the final revision. In Samantha’s school, the report card uses rubrics rather than grades, and parents are familiar with the system. Tom and Chizuko confront a different challenge. They know how to write for school, and they can judge the quality of their writing. In preparing for the SAT, they confront a different situation—they are taking a *test*! They have one chance to prepare a composition about an unknown topic that will be graded by a stranger, and the grade will “matter”; it will influence decisions about college admissions. They will use their previous experiences in judging their own performance to do the best that they can, but it is a new situation for them, and they are both anxious.

The scenarios span a range of evaluation experiences from what is called *formative assessment* to *summative assessment* (Andrade & Cizek, 2010). You are familiar with summative assessments if you have ever taken

a standardized test. It is a “bottom-line” experience. How well can you do filling in the multiple-choice bubbles under time pressure and circumstances that make you anxious? The stated purpose is to find out what students have learned at the end of a course of study, but the more important purpose is to compare students, to rank them. Formative assessment is generally described as “assessment that guides instruction” (Popham, 2008). In this category are assessments of skill and knowledge at the beginning of a school year, monitoring of individual progress, and even evaluation of instruction. We will focus on formative assessment that is teacher-based, that aims to improve student performance, and that is not used to grade or rank. Formative assessment is about tracking progress rather than accomplishment, making a movie rather than taking a snapshot (Calfee, 1997; Kellogg, 2008).

Best practices in formative writing assessment as defined above begin with an authentic task, where purpose and audience are clear and meaningful, where support and feedback are readily available, and where the final product has both personal and academic value for the student. Contemporary approaches to writing assessment (Black, Harris, Lee, Marshall, & William, 2003; Chappuis, Stiggins, Arter, & Chappuis, 2005; Chappuis et al., 2012; Harp, 2006; Stiggins, 2004) typically employ a conceptual framework similar to Figure 15.1, which shows how a teacher can view assessment as *inquiry*, as action research. The figure portrays formative assessment as a dynamic process rather than a routine activity. *Inquire* means to “look into, to seek, to search, to investigate.” It begins with identification and analysis of a problem. For Samuel, the challenge for the teacher was to determine conditions under which he could meet the kindergarten standard: three things about the topic. What might be going on when he stopped? Perhaps he didn’t really have three things to say about his sister. That seemed unlikely. Perhaps he was flustered. Perhaps he didn’t want to say anything. Perhaps he was overwhelmed by the situation.

Thinking through the problem generates hypotheses, hunches about what might be going on, and actions. In the second stage, the teacher conducts an experiment and collects data. If Samuel had nothing to say about the topic, or didn’t want to say anything, that was one thing. But if he was overwhelmed or flustered, then a *scaffold* should help. A few suggestions were enough to get him going. The joining of *instruct* and *assess* in the figure is intentional. When a problem arises, when a student is stymied, then the goal is to determine the conditions under which the student can perform, rather than stopping with failure. The assessment happened in the blink of an eye. The “intervention” was instantaneous—Ms. Hancock’s three leading questions. The evidence was equally immediate. Ms. Hancock evaluated Samuel’s responses and found them on target. The weekly newsletter provided her report.

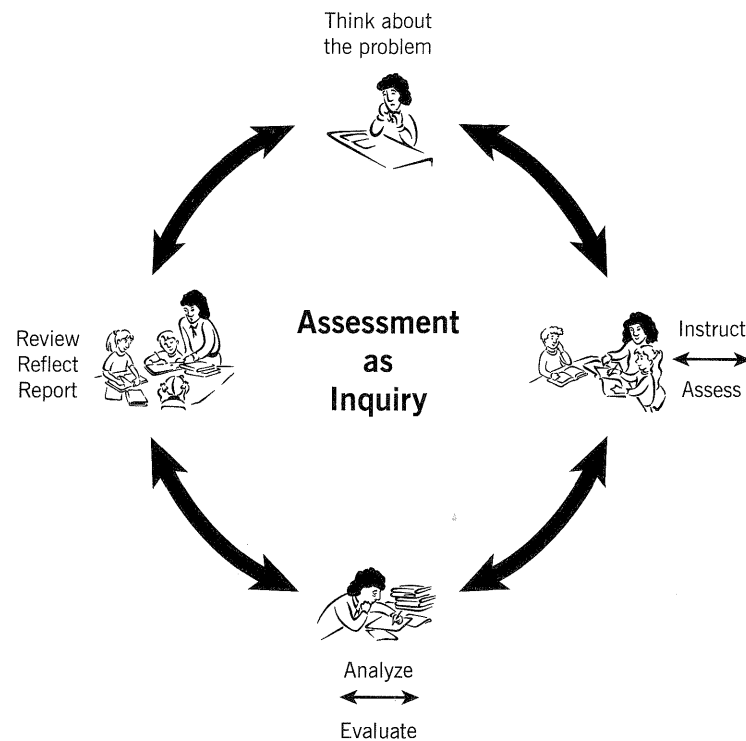


FIGURE 15.1. Literacy assessment as a process of teacher inquiry.

The experimental element in the figure is *instruct*, a word with the same root as *structure*, which carries the connotation of building, designing, framing, and completing. Teachers guide young people through increasing elaborate academic edifices across the school years—designing complex structures, engaging in a variety of construction tasks, checking their work along the way, and inspecting the final product. We can imagine them working in the “construction zone” (Newman, Griffin, & Cole, 1989). Literacy provides an essential tool kit (or machine shop) for the construction process. Best practices for writing assessment check the status of the kit: the tools need to be in good shape, and the user must know how to use them effectively. But authentic curricular goals are critical—building is more than learning how to hammer and saw. *Assess* is coupled with *instruct*, in the sense that, as the construction process moves along, there is continuous monitoring of the work by both the builder and the “supervisor.” Formative assessment is continuous and interactive; student-workers

are expected to check their progress as they move along, and to be able to explain what they are doing and why.

Analyze and evaluate in Figure 15.1 capture the task of reviewing evidence to make judgments about learning. When Ms. Hancock takes notes on Samuel’s words during his report, these serve as evidence, as does the scaffolding she provides along the way. Samuel was clearly eager to tell classmates about his new sister, but leading questions were necessary to keep him going. He was still learning his ABCs and, from one perspective, was a “nonreader.” When Ms. Hancock wrote his sentences in the newsletter, however, he could read his report on his own. These observations provide evidence for an evaluation that often takes shape as a story. What does the story tell about what Samuel knows and can do? What might be the most useful next steps instructionally? Such questions exemplify the evaluation process, which requires reflection and debate. The point is not to decide whether the performance is good or bad but to consider alternative interpretations that suggest various instructional responses—to think like an experimenter (Calfee & Hiebert, 1990). The question is not “Can Samuel compose/write a show-and-tell report?,” which implies a yes-or-no response. Rather, it is “Under what conditions can Samuel produce a show-and-tell report with particular characteristics?” (e.g., three ideas related to a central theme). The evidence in this case suggests that Samuel has not yet learned this task to the point where it has become automatic. On the other hand, with a bit of guidance he was able to complete the task and was enthused about his accomplishment. He was engaged, he could talk about the results, and the event set the stage for his future learning activities and provided a model for the entire class.

Best practices for writing assessment call for reviewing and reflecting on what has happened and then preparing a *report* of the event. The basic idea is to document the activity. In fact, classroom assessment is often on the fly, with the results recorded mentally; where the evidence is oral, memory may be all that is possible. An important feature of written material is that one does not have to rely on memory—there is a concrete record. The question is how to make effective use of the information. The most important record in formative assessment is one that serves the teacher in documenting student learning and steering instructional decision making. The student is clearly an important audience for such information, which can provide feedback, encouragement, guidance, and sometimes grades. Other audiences include parents, administrators, and other teachers. Reporting, except for formal mandates like report cards, tends to receive relatively little attention in educational situations, which is somewhat strange when you think about it. If you visit your doctor or auto mechanic, you expect assessment and evaluation to be part of the process, typically as a basis for

subsequent action. You also expect a record of the entire process: what was checked, what was found, and what was done. Best practices for writing should follow the same model, to monitor and shape student learning, and to improve the “curriculum in practice.”

Samantha’s teacher, Mr. Buchers, is tuned in to this principle. The class assignment is to write a research paper about a significant curriculum goal, the analysis of historical happenings. The task requires both reading and writing, but, most important, it requires thinking. Samantha will report regularly to the class about her project, and Mr. Buchers will gently but firmly model and shape questions during these discussions. What evidence does Samantha offer for her claims about a woman president? What about other interpretations? Lessons from previous decades? Possibilities for the future? Samantha’s written record informs Mr. Buchers about her progress in dealing with these questions. Tom and Chizuko, in contrast, feel that they are working in the dark. Their English teacher administers biweekly practice exams and offers suggestions for self-assessment. The opportunity to practice helps, but it is up to the students to review their progress and decide what they need to do to improve. In their case, the inquiry loop is broken.

Text-Based Writing

What should a developing writer write about? One answer, which seems rather obvious, is something with which he or she is familiar. Although “obvious,” this answer is problematic for several reasons. One is the enormous variation in the experiences that students bring to a task. “Write about your favorite animal” seems a reasonable request. But some students may not know much about any animals, favorite or otherwise, whereas others have choices ranging from home menageries to zoos, museums, and Dr. Seuss stories. Yet another reason is that the familiar may not seem worth writing about, or may lead to informal writing, of the “ya know what I mean” variety. Finally, students can approach this kind of writing from a variety of perspectives—stories, anecdotes, essays, descriptions—only some of which may be appropriate for the assignment.

The CCSS issue a clear call for writing to texts. At the outset, the CCSS require students “to write arguments to support claims from an analysis of substantive topics or texts . . . ; to write informative/explanatory texts to examine and convey complex ideas and information . . . through the effective selection, organization, and analysis of content [presumably from texts]; and to write narratives to develop real or imagined experiences or events . . . ” (p. 18). This task begins in kindergarten, where youngsters are to “use a combination of drawing, dictating, and writing to compose

opinion pieces in which they tell a reader [audience] the topic or name of the book they are writing about and state an opinion or preference” (p. 19), and similarly for informational works and narratives.

If this seems like a lot of writing, that is clearly what the writers intend: “To build a foundation for college and career readiness, students need to learn to use writing as a way of offering and supporting opinions, demonstrating understanding of the subjects they are studying, and conveying real and imagined experiences and events. . . . They need to appreciate that a key purpose of writing is to communicate clearly to an external, sometimes unfamiliar audience, and to adapt the form and content of their writing to accomplish a particular task and purpose. . . . Students must devote significant time and effort to writing. . . .” The authors probably intend for this work to be evaluated both summatively and formatively, to determine how well the CCSS are being met, and to guide instruction.

In text-based writing, students read one or more passages in preparation for writing to a prompt based on the text material.

“You are going to read *My Pet, Bobby the Boa*, which tells about a young girl, Susan, whose pet is a boa constrictor. It describes what it is like to own a pet snake, to take care of it, and ways in which it can be fun. Suppose your parents have given you a pet snake. Based on Susan’s story, describe what it would be like to take care of the snake, and to have fun with it as a pet.”

This writing allows students to express their individualities, but also grounds the task in the text. The source text can require more or less attention from the writer. For example, consider this prompt:

“When she wrote *Silent Spring* in 1962, Rachel Carson warned about the dangers from environmental pollution [extract]. Below are two editorials, one claiming that this threat has been lifted, the other arguing that the situation has worsened. What do you see as the strengths and weaknesses of the two editorials?”

When writing has become a commonplace of daily life in the classroom, as should happen under the new CCSS, the teacher confronts both opportunities and challenges. Evidence of student learning is available everywhere: reports on chapter books and short stories; summaries of science articles; editorials about historical events; essays about current events, and so on. These compositions display how well students handle both content and style. It is clearly impossible for teachers to grade every piece of student work, but neither can they ignore students’ efforts. The resolution of this conundrum is to select for formative evaluation those student works

that are most useful for guiding instruction and documenting growth. Students will soon take for granted the conditions of authentic writing, which allow time and offer support (from the teacher and other students). They also need to learn about the realities of on-demand writing typical of standardized test like the SAT. Each situation offers opportunities to review the distinctive features of best practices.

Text-based compositions generate information about both *content* and *quality*, about what students have learned and how well they can communicate it. One aim of the CCSS is to encourage teachers to consider writing as an integral part of learning for all curriculum domains, where the *what* is especially important. This chapter centers around the *how well* question, essential for effective communication. How are students to communicate what they know about a “subject matter”? One answer is through classroom discussions and teacher questioning. These are problematic for several reasons. They are often one-sided, with teacher talk dominating and student talk sparse, offering students limited opportunities to “compose.” Small-group techniques offer another option, but management poses a challenge, as does documentation.

Writing provides a practical answer to most of these problems—students can all write at the same time, and the information does not disappear into the air. But (1) students must write well enough to capture what they have to say, and (2) someone has to handle evaluation tasks. We do not have space to lay out the range of writing tasks that can fulfill these functions, but they include simple note taking (a lost art in today’s classrooms), reading notes (students write reactions to interesting or important points as they read), quick writes, and group projects, among others. These suggestions illustrate ways in which students can “devote significant time and effort to writing,” from the earliest grades onward, as called for by the CCSS. These tasks all provide opportunities for evaluation and feedback, but can easily overwhelm teachers if they have to bear the entire burden. We suggest that these are also opportunities for students to learn to take responsibilities.

Separating content and writing quality is an important first step in evaluation of text-based compositions. A student has produced a marvelous piece of writing, but the content shows little grasp of the topic or is completely off topic. Another student turns in a piece that is a real mess—poorly organized, full of misspellings, marred by grammatical flaws—but you can tell that the student is deeply engaged and has something to say about the passage. The challenge here is to appreciate the substance despite the mechanical problems.

The combining of content and literacy in the CCSS poses new challenges for writing assessment. In the past, students were given “writing tests” and writing quality was what mattered. The trait rubrics described

below were developed to handle this facet of a composition. Students were also asked to show what they knew about the various subject matters, sometimes by writing, but more often with multiple-choice questions. Under the CCSS, the goal is for students to learn to demonstrate their knowledge about school subjects by composing well-written essays. For classroom assessment, teachers will need to prepare well-crafted “questions,” and to think about answers that are well crafted when viewed through both content and writing lenses.

This chapter is about writing assessment, and that will be our focus. Here are a couple of practical ideas about how the teacher can deal with both content and quality. First, holistic grading is probably not the best tactic, even if it seems the easiest and quickest. Assigning a single score, grade, or judgment leaves the student unsure about both quality and content. One simple approach is to give a composition one grade for content coverage and a separate grade for writing quality. To be sure, a paper may be so poorly written that the content cannot be judged, in which instance that message is the best feedback. Second, the more clearly the content expectation is laid out in the writing prompt, the easier it will be to assess the composition. With text-based assessments, the prompt can be explicit about the function of the passage in drafting the composition: “Summarize the passage; relate the information to your experience; criticize the argument; point out the strengths and weaknesses.” Each of these prompt elements provides guidance for the writer, and the assessment can be tailored to how the writer responds.

Now let us turn to evaluation of writing quality, and the *analytic* or *trait rubrics* (Spandel, 2008; Culham, 2005), which are widely used at present. Most popular is the “Six Traits (Plus One)” approach:

- *Ideas*: The composition includes a central focus or theme, which is elaborated with relevant details, anecdotes, and similar features.
- *Organization*: The order and layout of the paper are coherent, with a clear sense of direction in communicating the focus or theme.
- *Voice*: The writer speaks directly to the reader and communicating a sense of purpose and an awareness of audience.
- *Word choice*: The vocabulary is precise, appropriate, and rich.
- *Sentence fluency*: One finds flow, connectedness, and variety in the construction of sentences; note that grammatical conventions are covered in the next trait.
- *Conventions*: Attention to mechanical features, including spelling, grammar, punctuation, and paragraphing.
- *Presentation*: A new facet that covers appearance, including handwriting, effective use of layout, and well-chosen illustrations, reflecting the emerging use of computers for polishing a work.

Numerous resources are available for this multitrait system, including rubrics for each trait, and examples of student writing that illustrate different levels of accomplishment for each facet (Northwest Regional Educational Laboratory [NWREL], 2012). Best practices in writing assessment are well served by these resources, which prepare the student for accomplished writing, from the elementary grades through high school into college and on to the variety of professions where writing is either central (newspaper reporters, magazine and book editors) or essential (anyone who prepares memos or documents as part of his or her job). Recall that the CCSS emphasize “college bound and career ready.”

The multitrait system works quite well, and is relatively simple to use. Computer supports are also available for scoring and for tailoring rubrics to particular applications, which promises to be quite helpful (e.g., CTB, 2012). But a few cautions deserve mention. *Voice* is both important and challenging in classroom writing. For serious writing in high school and beyond, a clear sense of purpose and awareness of audience are critical requirements for any writing assignment. Unfortunately, most writing prompts do not adequately address these two features. The audience is either the teacher (implicitly) or an artificial entity (“Write a letter to your parents”), and purpose is missing or artificial. As a result, student compositions lack an authentic voice—but the problem is the prompt rather than the student. The assignment is just an assignment. Under these conditions, expecting students to infuse their composition with personal voice—with an authentic sense of purpose and audience—is unrealistic. An honest voice might lead the student to begin, “I’m writing this paper for Ms. Martin because I have to. I only need a B, so I’m not going to really do my best, but hope this is good enough.” This problem can be handled in a couple of ways. One is use situations *within* the classroom that are as genuine and engaging as possible (some topics are more interesting and personally relevant than others). The other is to look for opportunities *outside* the classroom; with the arrival of the Internet, despite limited access in many schools, students can engage others from around the world in authentic dialogues.

A second point that deserves mention is *length*. Writing experts are conflicted about this feature; indeed, some think it is a mistake even to mention it. More is certainly not necessarily better, but students should know about the perils of “not enough,” and situations where “too much” can be a problem. Teachers routinely include expected length as part of an assignment (five paragraphs, two pages, etc.). If length is not included, it often matters nonetheless. The fifth grader who hands in three sentences when everyone else is filling a page is likely to receive a low grade, even if the sentences are well crafted and on topic. In the elementary grades, “more” is probably a positive outcome, certainly for a first draft. In the

later grades, the nature of the assignment may be important. Even here, it is worth remembering that the best predictor of scores on most college entrance writing exams is neither content nor style, but length.

The third point centers on *genre*, the type of writing called for by the assignment (Schleppegrel, 2004). Distinguishing between narrative and informational writing, between stories and reports, is an important first step, and students could benefit from greater clarity in the distinction between these two, especially given the emphasis on this distinction within the CCSS. In addition, we think that it will become increasingly important for students to learn about distinctions within the informational genre. For example, we have seen rubrics for narrative writing that emphasize topical focus, introduction, conclusion, and so on. This language is a mismatch to the narrative form, which builds on concepts like theme, setting, and resolution (Lukens, 2002). For informational texts, planning a simple descriptive piece around the five-paragraph essay is quite different from laying out a compare-and-contrast analysis, a process explanation, or a persuasive argument (Chambliss & Calfee, 1998).

The fourth point centers on the *content* or *substance* of a composition, which we covered earlier, but is not part of the six-trait system. What rubrics might be used to evaluate content? One approach uses coverage of the topic as the criterion. If the assignment is about earthquakes, did the student stick with earthquakes? From one perspective, this point is simple, but staying on topic can take many forms. The student can reproduce material from various sources, from paraphrasing to outright cutting and pasting. A student can develop the topic as a story, recounting his experiences during the San Francisco Loma Prieta quake. Other students can demonstrate understanding by transforming resources and experiences into a genuine composition—the building of something new from a collection of basic elements. Best practices in writing assessment should distinguish among these activities. Summarizing and note taking are important skills for students to learn to the point of fluency and as a context for practicing conventions. Storytelling is an engaging activity and provides another opportunity for practicing skills. To be sure, relatively few storytelling jobs are available for college graduates, but education should be about more than jobs.

At a practical level, we think that text-based writing assessments should also include a rubric that gauges students’ capacity to *transform* the substance of the topic (Bereiter & Scardamalia, 1987). The challenge is how to handle this task at a classroom level. Ideally, the teacher has led students through a topic like earthquakes (or a more general domain like plate tectonics), and individuals or small groups have conducted additional reading and research, exploring the domain along paths that may be new to the teacher. Teachers cannot be experts on everything, and don’t need to

be. But how can a teacher offer students the freedom to explore and judge the quality and accuracy of diverse reports, without losing their way in unknown territory?

In a project on reading and writing about science (Miller & Calfee, 2004), we and our colleagues spent considerable time and energy wrestling with such questions. On the one hand, it is important for the student to include fundamental concepts and relations in his or her composition, what are referred to as *schemata* (Anderson, Spiro, & Anderson, 1978), or sets of ideas and words connected in particular ways, which can serve as a template for evaluating presentations. For instance, volcanoes, an engaging topic across the grades, take two wildly different forms in classrooms: (1) the vinegar-and-soda version in which these ingredients, along with red dye, are poured into a clay model to generate an eruptive fizz; and (2) the plate-tectonics account, which suggests that the earth is cracked into great chunks by the roiling of magma, where volcanoes emerge as “blurps,” like in a kettle of thick pea soup. However, a student decides to treat the topic of volcanoes, a composition that captures the scientific content must include the pea-soup model in some form. An enlightening example comes from observation of a small-group project by students at a school near Honolulu. The students had prepared a lengthy report for the weekly news magazine on the difference between the vinegar-and-soda exercise in the classroom and what they had discovered from reading about the volcanic terrain on which they walked. Their report displayed evidence of deep, transformational learning.

Constructing Classroom-Based Writing Assessments

As noted earlier, the CCSS will offer significant opportunities for teachers to track learning literacy and learning content from kindergarten through high school—and to engage students as partners in the process. The assessment consortia are creating formative assessment packages, which should provide models for teachers. But progress depends on teachers taking charge of the process, which means creating performance assessments tailored to individual classroom situations. This notion is clearly “possible,” as can be seen by what happened in the 1980s and 1990s: performance-based assessments (Finch, 1991), writing portfolios (Calfee & Perfumo, 1996), and the California Learning Assessment System (CLAS; Ormsby, 1994). Reviving these accomplishments will be essential if the CCSS are to help all students to be “profession and career-ready” when they leave high school.

This final section describes ways to create dynamic assessment systems for curriculum-embedded writing (Calfee & Miller, 2005). The facets covered in this section are important for any writing assessment. The purpose

here is to place these facets within the context of the classroom teacher’s daily work across the content areas. When a testing company or state develops a large-scale writing assessment, it calls upon teams of experts, conducts pilot runs, computes complex statistics, and so on. It is another thing for the classroom teacher to prepare a writing task that is relatively spontaneous, intended for a one-time, low-stakes formative assessment. The second scenario is actually more critical for learning, assuming that the teacher actually uses the results to inform his or her judgments about student learning. The stakes may not seem “high,” but they can be significant. Before discussing our ideas about classroom-based assessment, let us note the distinctions with other programs that look similar on the surface. District interim benchmarks are now employed in many schools to “monitor student progress,” often with the announced goal of using the results to inform instruction. Interim benchmarks will be part of the CCSS assessments. But benchmarks resemble standardized tests and are identical for practical purposes. They are administered on a preset schedule, are standardized, and generate reports that are too generic to guide specific instructional decisions. Textbook packages often include end-of-unit tests, which are virtually identical to benchmark tests. Finally, response to intervention (RTI; Lipson & Wixson, 2010) sounds like it might fill the bill—intervene and then decide how to respond to student needs. But again the tests are generic, as is the typical intervention. Classroom-based writing assessments are anything but routine. They are tailored to a specific situation, based on an activity either designed by the teacher or significantly adapted from an existing model.

What are some ways in which a (busy) classroom teacher can approach this task? The basic building blocks needed to construct a writing assessment are similar for virtually any scenario, formative or summative: *prompts*, *procedures*, and *rubrics*. We assume a text-based setting, but the principles also apply to open-ended situations. Let us review each of these constructs, emphasizing the application to formative assessment in classroom settings.

The *prompt* sets the stage for the writing task. Rather surprisingly, relatively little research has been reported on how variation in prompt design affects the quality of student writing. Constructing a prompt is almost like writing a passage. In a brief amount of space, the teacher has to cover the following points:

- Develop a *focus statement* that directs students’ attention to the key topic for the composition, activates prior knowledge (including the target text), and guides thinking about the task.
- Present, as clearly as possible, the *purpose* of the composition. Words like *tell*, *describe*, *explain*, *convince*, and *illustrate* serve this

purpose, especially if students have received prior instruction on these terms.

- Identify the *audience* for the work. This is a challenge in school writing because everyone knows that the teacher is the real audience, but students can learn to imagine various audiences. Indeed, writers often have to rely on imagination. Freedman (1997) gives an informative account of the ways in which high school students in San Francisco and London handled audience in writing to one another. With a little creativity, local audiences can be identified: the principal, the mayor, the editor of the newspaper. Writing for nobody can be discouraging.

- Where appropriate, specify the *form* of the product, such as a paragraph (or more) or a letter (a favorite because of the style).

- Tell the writers as much as possible about the *criteria* to be used in judging the work. How important are supporting details? If a text is provided, how should it be used? Is the work a draft, or should the student attempt a polished product? Ideally, for classroom assessments, criteria have been defined early in the school year and practiced (with feedback) regularly. If the multitrait system is being used, give it away—discuss the traits and rubrics with the students. If content is important (and it should be), review the main points with the class.

- Think about possible *answer spaces* for each prompt, the ideas that students might generate in response to the prompt. Think about ways in which students might be directed toward productive paths or how they might be stalemated or led astray. For example, consider the following prompt:

“Describe the differences between evergreen and deciduous trees. Based on your personal experiences, what is your favorite kind of tree for each type?”

When students are asked to build a composition around personal experience, which appears frequently in writing prompts, the way is open for them to move in any of a wide range of areas or nowhere, depending on the topic. We are not suggesting that prompts never invite students to draw on personal experience, but rather that the ground rules for such invitations require careful attention.

The *procedure* for a writing assessment builds, in the ideal situation, on what we know about the writing process (Gray, 2000). Students need time, information about the topic, scratch paper, support and advice, and a writing strategy. *Time* is arguably the most precious classroom

commodity—there is never enough time, even for basic writing. Time is needed for reading and scoring, for discussing and reviewing, and for handling the needs of individual students. No wonder many teachers assign writing a low priority. We offer two suggestions in this arena. The first is never to ask students to write about nothing. The second is to engage them in the assessment process. By “writing about nothing,” we mean exercises (including district assessments) that are solely designed for writing. The result is akin to taking a driving test; you drive to show that you can drive, but you cannot go anywhere! School subjects provide a plethora of openings for students to demonstrate knowledge, reasoning ability, and communicative capacity by composing, both orally and in writing. Especially when embedded in an authentic project, writing tasks evoke imagination and force that is otherwise totally lacking.

Information about *topic* was mentioned earlier in the distinction between text-based and stand-alone writing. Most readers can remember the closed-book exams of days past (they can still be found, of course). The contrast with writing tasks in life after school is striking. Seldom does a professional writer approach a problem (or write about it) with a closed book. Imagine a doctor, about to operate on you, announcing, “This is a closed-book operation!” We also suggest that information be made as public as possible. Walls in tomorrow’s classrooms should be covered with notes, graphs, and pictures.

What a writer needs most are *words*. Students will write more compelling and better organized papers when they can lift their eyes to the classroom walls and find words and phrases that jumpstart them. Those who write for a living depend on this approach and rely on scratch paper and room to spread it out.

High-tech colleagues often puzzle about how *computers* might be used for writing in the classroom. They notice that students prepare a draft on paper, then use the computer for revision and publication, and ask, “Why don’t they write on the computer from the beginning, like I do?” In fact, many of these same colleagues rely on paper to get started. Printed pages can be spread out for scribbling and sketching. It takes experience and practice with the computer screen to write exclusively on a computer (Whitham, 2005; Herrington, Hodgson, & Moran, 2009; Huot & Neal, 2008).

How the teacher arranges the social context for writing can play a significant role as a procedural facet for both instruction and assessment. Writing can be a lonely task. The two of us have written together, and we know the joys (and occasional frustrations) that come from collaboration. We mention *social support* partly to encourage teachers to consider group writing projects. To be sure, it is important to counsel students about how to work together in constructing a composition, and to monitor the group

process. But a good deal of writing in college and in careers is collaborative, and so these activities promise long-term benefits. The CCSS call for collaborative work in both the writing and the speaking-listening domains. The last element in procedure is strategy, the process that a student writer moves through in creating a composition (Tompkins, 2011). You can find numerous variations on process, but the main ideas are captured by three two-part alliterative phases: (1) *develop* and *draft*, (2) *review* and *revise*, and (3) *polish* and *publish*. Not every writing assessment incorporates all of these elements, but best practices start with this design as the foundation. In standardized stand-alone tests, for example, the writer generally has time only to develop and draft.

The third element in creating a classroom-based assessment focuses on the bottom line. How well has the student completed an assignment? What grade should you assign to the work? “Grades” have been largely replaced by a new concept, the *rubric*. We have used this term earlier in the chapter, assuming that you have probably heard the word, but let us briefly take a closer look. Note that rubrics are often assigned after a composition is completed, and often as a holistic judgment, which is probably not best practice. It makes more sense to begin the task with the criteria in mind and to review progress throughout the process, so that the final ratings come as no surprise.

Advice about appropriate rubrics for writing assessment can be found in a variety of sources (e.g., Arter, McTighe, & Guskey, 2001). The primary division is between *holistic* and *analytic trait* strategies. In holistic scoring, which dominates large-scale assessment, the rater gives the composition a brief reading (a few minutes at most) and assigns it a single score. Raters undergo intense training for this task, during which they review *anchors*, prototypical papers in each of the score categories. To check consistency, benchmark papers are inserted during the scoring process, and raters are recalibrated as necessary. This process leads to reasonably high interrater reliability, which means that judges agree with one another, both overall and in judging individual students. The problem, of course, is knowing what the ratings mean and what to do with the information. For practical purposes, a holistic rubric acts like a grade, or a summative measure. The strategy is poorly suited to classroom assessment.

Analytic rubrics may be more useful to both teacher and student for understanding what is working and what needs fixing, but they are more complex and take more time. What can be done to lighten the load? One answer relies on technology, where computer-based text analysis can do the heavy lifting. Programs like Intelligent Essay Assessor, E-Rater, and Coh-Metrix (Ericsson & Haswell, 2006; Graesser, McNamara, & Kulikovich, 2011; Hagerman, 2011; Shermis & Daniels, 2003) provide students and teachers with a rapid evaluation of the quality of a composition. Some

programs even provide an analysis of the match to the content schemas. Which critical concepts and relations from the topic are found in the composition, and which are missing (e.g., Pearson Publishing, 2012)? If this idea seems far-fetched, remember that, not too long ago, calculating the readability for a passage required a fair amount of work. Now it requires only a keyboard click in Word to determine that the Flesch-Kincaid readability for this chapter is 10.5—a bit higher than intended.

The second way to deal with grading, one that applies to all facets of composition assessment, is to give away the writing task, in part or whole, to students. The teacher can accomplish this goal in a variety of ways, including cooperative learning and peer review. What could be more sensible than teaching students to collaborate on projects, including writing tasks, and to learn to critique their own work? The main advice here centers on teaching students about the concepts of genre, traits, and rubrics. This strategy offers at least two clear advantages. One is that students become independent learners in the fullest sense, responsible for handling all aspects of communicating their mastery of a topic. The other is that the teacher no longer bears sole responsibility for student learning; in particular, he or she does not have to read and review every piece of student writing in detail. Rather, his or her task is to monitor and discuss the students’ reading of their work. Student-led parent conferences in the elementary grades can serve to further extend this principle by engaging parents in the dialogue.

Two potential problems might seem worrisome. First, what if students do a poor job of evaluating their work? Or what if they cheat? Second, might it not be easier for the teacher to do the work rather than spend the energy needed to teach students how to handle the task? The response to both questions is the same: teaching students to become independent and responsible learners is difficult, but addressing this challenge is critical for reform of schooling in our country. These issues emerge with special clarity for content-area writing. When the conditions are right, writing reveals thinking with unusual clarity. The results show up partly as scores and grades, but more important are the portraits that students construct in demonstrating their understanding of topics and tasks and in revealing their capacity to “go beyond the information given” (Bruner, 1973).

Challenges and Opportunities

Basic skills in reading and mathematics have held center stage since the advent of NCLB. The basics cannot be ignored, but if the nation’s students are to meet the new CCSS, then teachers need to meet the challenges of helping all students become proficient writers in the content areas. The principle here is that writing reveals thinking, that the capacity to lay out

one's understanding in a clear, organized, and compelling fashion is an essential tool for thinking and for communication.

Effective and efficient formative assessment is a critical requisite for achieving this goal. Writing assignments are of limited value unless they are accompanied by informed and informative feedback on both the process and the content of the compositions. The techniques for planning and conducting such assessments are not mysterious; we know a great deal about best practices from both research and practical experience. As the CCSS point out, fulfilling these practices depends on classroom teachers who possess appropriate knowledge and skill, and who have opportunities for professional dialogue on these matters, much as physicians have opportunities for medical rounds. Classroom teachers also need the institutional support that recognizes the validity of assessments grounded in genuine performance activities. They can then pass on to their students the benefits of these opportunities and resources.

We hope that, as you reflect on the array of topics covered in this chapter, you will envision the planning and management of a writing assessment as an organic exercise, where you begin with an overarching design, realizing that, much like an orchestra conductor, your role is not to tell the harpist when to pluck a particular string or the timpanist when to strike a drumhead. Rather, your task is to listen to the ensemble, your baton guiding the tempo, but more often pointing to individuals to refine details that might otherwise go unnoticed. The metaphor appears in the CCSS, where a concluding statement brings together the numerous parts into a challenging whole: "For students, writing is a key means of asserting and defending claims, showing what they know about a subject, and conveying what they have experienced, imagined, thought, and felt" (p. 63).

References

- Adler, M. J., & van Doren, C. (1967). *How to read a book*. New York: Touchstone Books.
- Anderson, R. C., Spiro, R. J., & Anderson, M. C. (1978). Schemata as scaffolding for the representation of information in connected discourse. *American Educational Research Journal*, 15, 433-440.
- Andrade, H. L., & Cizek, G. J. (Eds.). (2010). *Handbook of formative assessment*. New York: Routledge.
- Arter, J. A., McTighe, J., & Guskey, T. R. (2001). *Scoring rubrics in the classroom: Using performance criteria for assessing and improving student performance*. Newbury Park, CA: Sage.
- Bereiter, C., & Scardamalia, M. (1987). *The psychology of written composition*. Hillsdale, NJ: Erlbaum.
- Black, P., Harris, C., Lee, C., Marshall, B., & William, D. (2003). *Assessment for learning: Putting it into practice*. Buckingham, UK: Open University Press.
- Bruner, J. S. (1973). *Beyond the information given: Studies in the psychology of knowing*. Oxford, UK: Norton.
- Calfee, R. C. (1997). Assessing development and learning over time. In J. Flood, S. B. Heath, & D. Lapp (Eds.), *Handbook for literacy educators: Research on teaching the communicative and visual arts* (pp. 144-166). New York: Macmillan.
- Calfee, R. C., & Hiebert, E. H. (1990). Classroom assessment of reading. In R. Barr, M. Kamil, P. Mosenthal, & P. D. Pearson (Eds.), *Handbook of research on reading* (2nd ed., pp. 281-309). New York: Longman.
- Calfee, R. C., & Miller, R. G. (2005). Breaking ground: Constructing authentic reading-writing assessments for middle and secondary students. In R. Indrisano & J. Paratore (Eds.), *Learning to write, writing to learn: Theory and research in practice* (pp. 203-219). Newark, DE: International Reading Association.
- Calfee, R. C., & Perfumo, P. (Eds.). (1996). *Writing portfolios in the classroom: Policy and practice, promise and peril*. Mahwah, NJ: Erlbaum.
- Chall, J. S. (1995). *Stages of reading development*. New York: Harcourt College Publishers.
- Chambliss, M. J., & Calfee, R. C. (1998). *Textbooks for learning: Nurturing children's minds*. Oxford, UK: Blackwell.
- Chappuis, S., Stiggins, R. J., Arter, J., & Chappuis, J. (2005). *Assessment for learning: An action guide for school leaders*. Portland, OR: Assessment Training Institute.
- Chappuis, S., Stiggins, R. J., Chappuis, J., & Arter, J. (2012). *Classroom assessment for student learning: Doing it right—using it well* (2nd ed.). New York: Pearson.
- Cizek, G. J. (2010). An introduction to formative assessment. In H. L. Andrade & G. J. Cizek (Eds.), *Handbook of formative assessment* (pp. 3-17). New York: Routledge.
- College Board. (2006). *The keys to effective writing*. Retrieved March 13, 2006, from www.collegeboard.com.
- Culham, R. (2005). *6 + 1 traits of writing: The complete guide*. Portland OR: Northwest Regional Educational Laboratory.
- Educational Testing Service. (2010). *Center for K-12 assessment and performance management*. Austin, TX: Author. Retrieved April 22, 2012, from www.k12center.org.
- Ericsson, P. F., & Haswell, R. (2006). *Machine scoring of student essays: Truth and consequences*. Logan: Utah State University Press.
- Finch, F. L. (Ed.). (1991). *Educational performance assessment*. Chicago: Riverside.
- Freedman, S. W. (1997). *Exchanging writing, exchanging cultures*. Cambridge, MA: Harvard University Press.
- Graesser, A. C., McNamara, D. S., & Kulikovich, J. M. (2011). Coh-Metrix: Providing multilevel analyses of text characteristics. *Educational Researcher*, 40, 223-234.

- Gray, J. R. (2000). *Teachers at the center*. Berkeley, CA: National Writing Project.
- Hagerman, C. (2011). An evaluation of automated writing assessment. *JALTCAL-Journal*, 7(3), 271–292.
- Harp, B. (2006). *The handbook of literacy assessment and evaluation*. Norwood, MA: Christopher-Gordon.
- Herrington, A., Hodgson, K., & Moran, C. (Eds.). (2009). *Teaching the new writing: Technology, change, and assessment in the 21st-century classroom*. New York: Teachers College Press.
- Huot, B., & Neal, M. (2008). Writing assessment: A techohistory. In C. A. MacArthur, S. Graham, & J. Fitzgerald (Eds.), *The handbook of writing research* (pp. 417–432). New York: Guilford Press.
- Kellogg, R. T. (2008). Training writing skills: A cognitive developmental perspective. *Journal of writing research*, 1(1), 27–52.
- Lipson, M. Y., & Wixson, K. K. (Eds.). (2010). *Successful approaches to RTI: Collaborative practices for improving K–12 literacy*. Newark, DE: International Reading Association.
- Lukens, R. J. (2002). *Critical handbook of children's literature*. Boston: Allyn & Bacon.
- Miller, R. G., & Calfee, R. C. (2004). Making thinking visible: A method to encourage science writing in upper elementary grades. *Science and Children*, 42(3), 20–25.
- National Governors Association & Council of Chief State School Officers. (2010). *Common Core State Standards in English language arts/literacy for social studies/history, science, and technical subjects*. Washington, DC: Authors. Retrieved from www.corestandards.org.
- National Institute of Child Health and Human Development. (2000). *Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction*. Washington, DC: Author.
- Newman, D., Griffin, P., & Cole, M. (1989). *The construction zone: Working for cognitive change in school*. New York: Cambridge University Press.
- Northwest Regional Educational Laboratory. (2012). *6 + 1 trait writing*. Portland, OR: Education Northwest. Retrieved April 21, 2012, from <http://education-northwest.org/traits>.
- Ormsby, M. (1994). *Preparing students for CLAS (California Learning Assessment System)*. Forestville, CA: Catalysts for Learning.
- Pearson Publishing. (2012). *WriteToLearn*. New York: Author. Retrieved April 21, 2012, from www.writetolearn.net.
- Popham, W. J. (2008). *Transformative assessment*. Alexandria VA: Association for Supervision and Curriculum Development.
- Richards, I. A. (1942). *How to read a page*. Boston: Beacon Press.
- Richart, R., Church, M., & Morrison, K. (2011). *Making thinking visible*. San Francisco: Jossey-Bass.
- Schleppegrel, M. (2004). *The language of schooling*. Mahwah, NJ: Erlbaum.
- Shermis, M., & Daniels, K. E. (Eds.). (2003). *Automated essay scoring: A cross-disciplinary perspective*. Mahwah, NJ: Erlbaum.

- Spandel, V. (2004). *Creating writers through 6-trait writing assessment and instruction*. Upper Saddle River, NJ: Pearson Education.
- Stiggins, R. J. (2004). *Student-involved assessment for learning*. Upper Saddle River, NJ: Prentice Hall.
- Tompkins, G. E. (2011). *Teaching writing: Balancing process and product* (6th ed.). Upper Saddle River, NJ: Merrill.
- Whitham, C. (2005). *Teaching and evaluating writing in the age of computers and high-stakes testing*. Mahwah, NJ: Erlbaum.
- Zinsser, W. (1988). *Writing to learn*. New York: Harper.